

Remarks

Applicants appreciate the thorough and detailed examination of the present application as evidenced by the Office Action dated January 4, 2006 (hereinafter, the "Office Action"). Claims 24, 25, 27, 29-35, 45-50, 55 and 58 are pending upon entry of this Amendment. Applicants respectfully submit that the pending claims are patentable over the cited references for at least the reasons discussed herein.

I. Claim Rejections Under 35 U.S.C. § 102(e)

Claims 27, 55 and 58 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,989,999 to Levine et al. (hereinafter, "Levine et al."). *See* Office Action, page 2.

Although Applicants respectfully disagree with this assertion, Applicants have amended Claim 27 to incorporate the recitations of Claim 28. Accordingly, Applicants respectfully submit that Claims 27, 55 and 58 are not anticipated by Levine et al., and Applicants respectfully request that these claim rejections be withdrawn.

II. Claim Rejections Under 35 U.S.C. § 103

Claims 24, 25, 28-35 and 45-50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Levine et al. in view of the cited references. *See* Office Action, pages 3-10. At least in view of the amendment discussed above, Levine et al. fails to serve as a reference that renders the present invention obvious, and none of the secondary references cited supply the recitations missing from Levine et al. in order to cure the deficiencies thereof. It is only through impermissible hindsight combined with picking and choosing portions of the cited references to the exclusion of deficient and/or divergent teachings is one of ordinary skill in the art able to arrive at the present invention. Thus, Applicants respectfully submit that Claims 24, 25, 28-35 and 45-50 are patentable over the cited references for at least this reason.

Applicants further note that Claims 28, 29 and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Levine et al. as applied to Claims 27, 55 and 58 and further in view of U.S. Patent No. 5,501,739 to Yamada et al. (hereinafter, "Yamada et al."). *See* Office Action, page 3. As indicated above, Applicants have canceled Claim 28 and

incorporated the recitations of Claim 28 into Claim 27. Thus, this rejection is discussed in view of Claims 29 and 35.

For at least the reasons discussed above, Claims 27, 55 and 58 are not unpatentable in view of Levine et al. Moreover, Applicants submit that one of ordinary skill in the art would not be motivated to combine Levine et al. and Yamada et al. More specifically, Levine et al. is directed to construction of a tantalum nitride film including a diffusion barrier with the ability to impede the diffusion of contact metals such as aluminum or copper. *See* Col. 3, lines 58-63. Yamada et al. is directed to an apparatus and method for forming a thin film, which can prevent the generation of dust on the surface of a film after the film is formed. *See* Col. 2, lines 14-17. Yamada et al. further discusses BPSG films, SiO₂ films, PSG films, NSG films and SiON films, noting that these films have high hygroscopic properties, and therefore, the films absorb moisture over time, resulting in dust on the surface thereof and inviting a deterioration of their insulating properties. *See* Col. 1, lines 53-57. Yamada et al. does not discuss construction of a tantalum nitride film as discussed in Levine et al. or preventing the accumulation of dust or improving the insulating properties of tantalum nitride films. Thus, one of ordinary skill in the art would not be motivated to combine the teachings of Levine et al. and Yamada et al., which are directed to solving different problems for distinct materials.

Accordingly, Applicants respectfully submit that Claims 29 and 35 are not unpatentable in view of the cited references, and Applicants respectfully request that the rejection of Claims 29 and 35 be withdrawn for at least these additional reasons.

Claim 45 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Levine et al. in view of Yamada et al. and U.S. Patent No. 4,786,352 to Benzing (hereinafter, "Benzing"). For at least similar reasons discussed above as they relate to Claim 27, Levine et al. fails to render Claim 45 unpatentable. Additionally, Applicants submit that one of ordinary skill in the art would not be motivated to combine Levine et al. and Yamada et al. for at least the reasons discussed above. Benzing is directed to "an apparatus for the in-situ cleaning of the interior surfaces of a processing chamber and/or tooling or substrates disposed within said chamber where said chamber is composed substantially of dielectric material having at least one powered and one grounded electrode formed from a thin film of conductive material deposited directly on the exterior surface of said chamber, a means for introducing gas into the chamber, a means for establishing and maintaining a reduced pressure environment within the chamber, and a supply of radio frequency power." Abstract

(reference numerals omitted). Benzing does not, however, compensate for the lack of motivation to combine Levine et al. and Yamada et al., and Benzing does not supply the missing recitations in view of the lack of deficient teachings resulting from the insufficient motivation to combine the references. Accordingly, Applicants submit that Claim 45 and claims that depend therefrom are not unpatentable in view of the cited references, and Applicants respectfully request that the rejection of Claims 29 and 35 be withdrawn for at least these additional reasons.

In view of the amendments presented herein and further in view of the failure of the cited references to disclose all the claim recitations of the present invention and to suggest the modification of the references or the combination of reference teachings in order to arrive at the claimed invention, Applicants respectfully request that the claim rejections under 35 U.S.C. §103 (a) be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully request that all outstanding rejections to the claims be withdrawn and that a Notice of Allowance be issued in due course. The Examiner is invited and encouraged to contact the undersigned directly if such contact will expedite the prosecution of the pending claims to issue. In any event, any questions that the Examiner may have should be directed to the undersigned, who may be reached at (919) 854-1400.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Shawna Cannon Lemon", with a horizontal line extending to the right.

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